

Appl. No. 10/648,594  
Amdt. Dated Apr. 20, 2005  
Reply to Office Action of Mar. 14, 2005

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. Claim 1 (currently amended): A thermal interface material comprising:

a polymer matrix having a thermally conductive first face and an opposite thermally conductive second face; and

a plurality of carbon nanocapsules incorporated in the polymer matrix, the carbon nanocapsules being filled with metal nano-grains.

Claim 2 (original): The thermal interface material as recited in claim 1, wherein the polymer is generally a reaction product of a polyether polyol and an isocyanate.

Claim 3 (original): The thermal interface material as recited in claim 2, wherein a molecular weight of the polyether polyol is in the range from 500 to 5000.

Claim 4 (original): The thermal interface material as recited in claim 2, wherein a functionality of the polyether polyol is in the range from 3 to 9.

Claim 5 (original): The thermal interface material as recited in claim 2, wherein a molecular weight of the isocyanate is in the range from 200 to 800.

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Claim 6 (original): The thermal interface material as recited in claim 2, wherein a functionality of the isocyanate is in the range from 2 to 6.

Claim 7 (canceled)

Claim 8 (original): The thermal interface material as recited in claim 1, wherein the carbon nanocapsules are enclosed with thermally conductive material.

Claim 9 (original): The thermal interface material as recited in claim 8, wherein the thermally conductive material comprises indium and/or copper.

Claim 10 (canceled)

Claim 11 (currently amended): The thermal interface material as recited in claim [[10]] 1, wherein the metal nano-grains comprise silver, copper and/or phosphor bronze.

Claims 12-19 (canceled)

Claim 20 (previously presented): The thermal interface material as recited in claim 8, wherein a diameter of each carbon nanocapsule is in the range from 5 to 50nm.